

Salamanders

Week 4

Words of the day

- Pulmo – (prefix) lung, usually denoting lung like, to do with the lungs or breathing
- Bouton – enlarged terminal of an axon branch where it forms a synapse
- Quadrant – all the cells derived from one of the first four blastomeres
- Pulp – internal cavity of vertebrate tooth, containing connective tissue, nerves and blood vessels
- Pulse – the seed of a legume

Creature Feature

- *Andrias davidianus*
- Chinese giant salamander
- Rocky, mountain streams and lakes in China
- Largest at 180 cm (6ft)
- <https://www.youtube.com/watch?v=GEFl3RV8G8E>



Chinese Giant Salamander

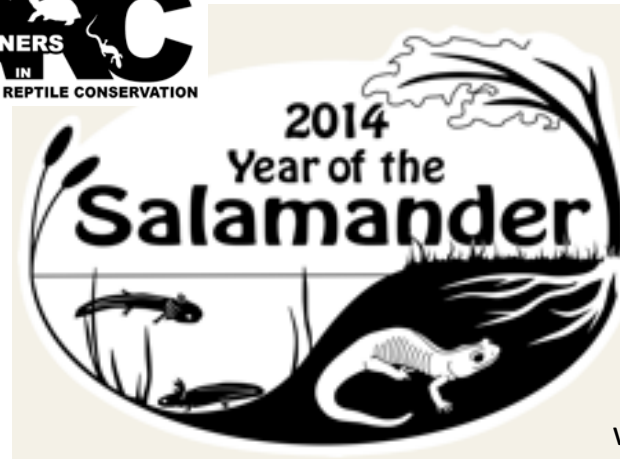
- IUCN rating: critically endangered
 - Last date assessed: April 2004
 - Data deficient until 1996
- Major threats: Commercial over-exploitation for human consumption is the main threat to this species. It has also suffered from habitat destruction (e.g., from the construction of dams) and habitat degradation (e.g., water pollution from mines). Although there is commercial farming of this species, the vast majority of Chinese Giant Salamanders being traded are believed to originate from the wild.

Semester Ahead

- Lizards and Snakes (Week of 5th)
- Skulls (Week of 12th)
- Exam 1 for class – October 2nd

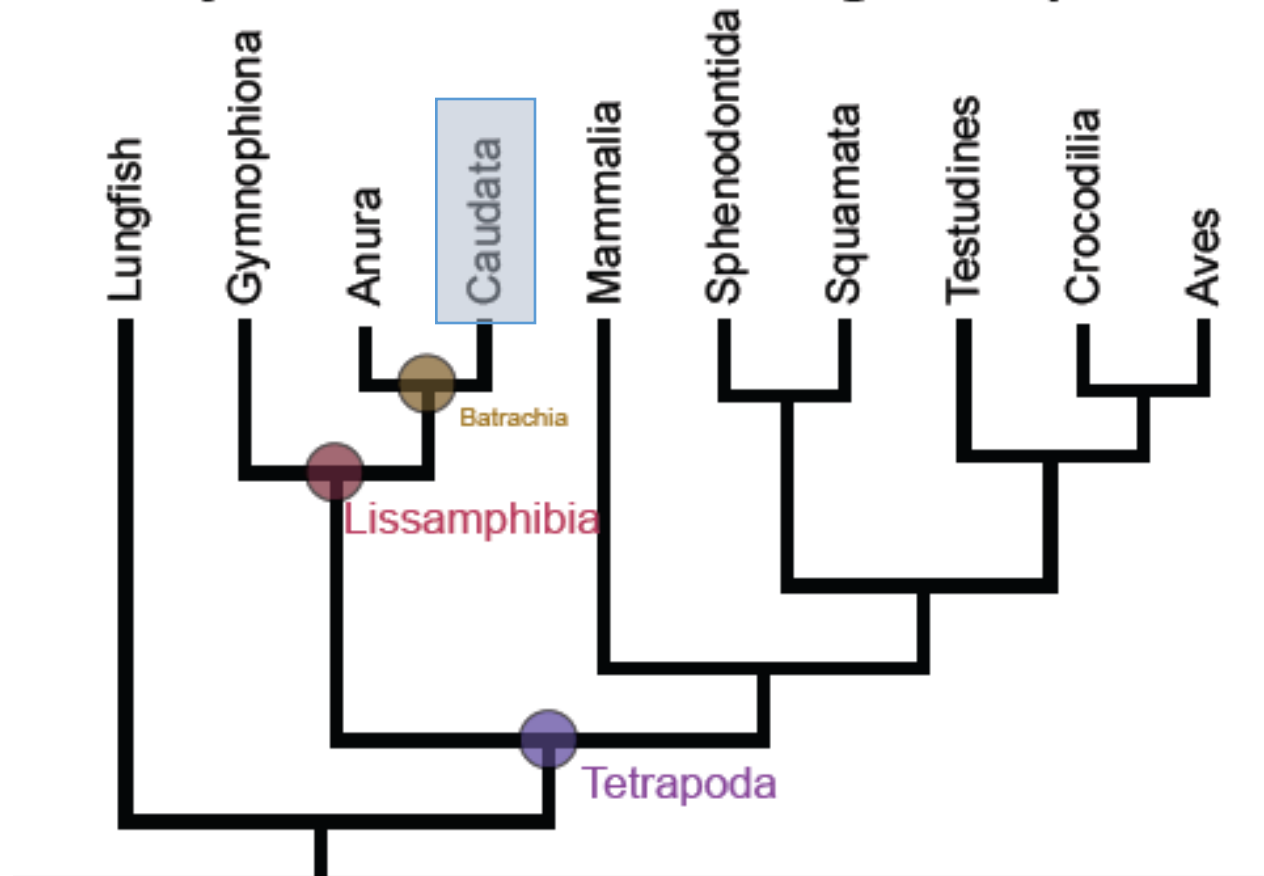


Salamander Diversity



www.parcplace.org

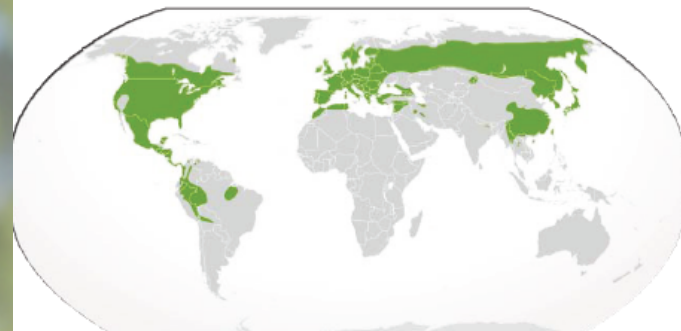
Systematics of living “herps”



Order: Caudata

~ 9% of Amphibian diversity

- 10 Families
- 67 Genera
- 668 Species (as of 9/9/14)



- Holoarctic distribution
- Mostly temperate and subtropical
- MOIST habitats



J. Uyeda

Diagnostic Characteristics

- Distinct Head, Trunk, and Tail
- Four limbs; Hind limbs not larger than forelimbs (*may be reduced or absent in some spp)
- Toes WITHOUT claws



Diagnostic Characteristics

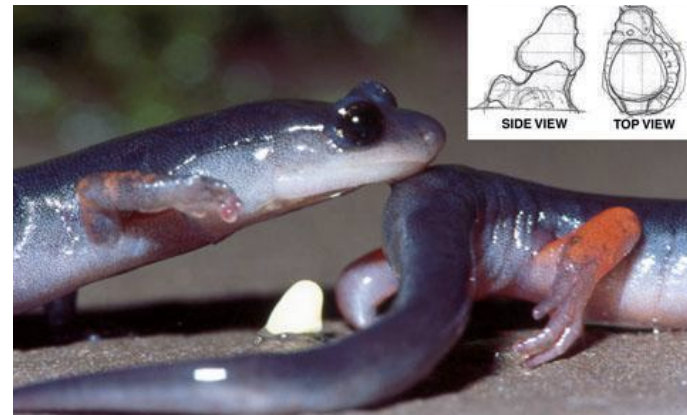
- Mucus and poison glands in skin – aggregations called **COURTSHIP GLANDS**



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Diagnostic Characteristics

- Derived lineages have internal Fertilization **via SPERMATOPHORE (>90%)**
- **MOST** are oviparous



Plethodon.science.oregonstate.edu

Caudata clades

- Ambystomatidae
- Amphiumidae
- Cryptobranchidae
- Dicamptodontidae
- Hynobiidae
- Plethodontidae
- Proteidae
- Rhyacotritonidae
- Salamandridae
- Sirenidae



Class Amphibia (Amphibians)

Order Anura
(Frogs and Toads)

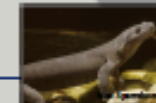
Order Caudata
(Salamanders)

Order Gymnophiona
(Caecilians)



Families

Hynobiidae
(Asiatic Salamanders)



Cryptobranchidae
(Giant Salamanders)



Sirenidae
(Sirens)



Proteidae
(Waterdogs and Mudpuppies)

Rhyacotritonidae
(Torrent Salamanders)

Amphiumidae
(Amphiums)

Plethodontidae
(Lungless Salamanders)

Salamandridae
(Newts)

Dicamptodontidae
(Pacific Giant Salamanders)

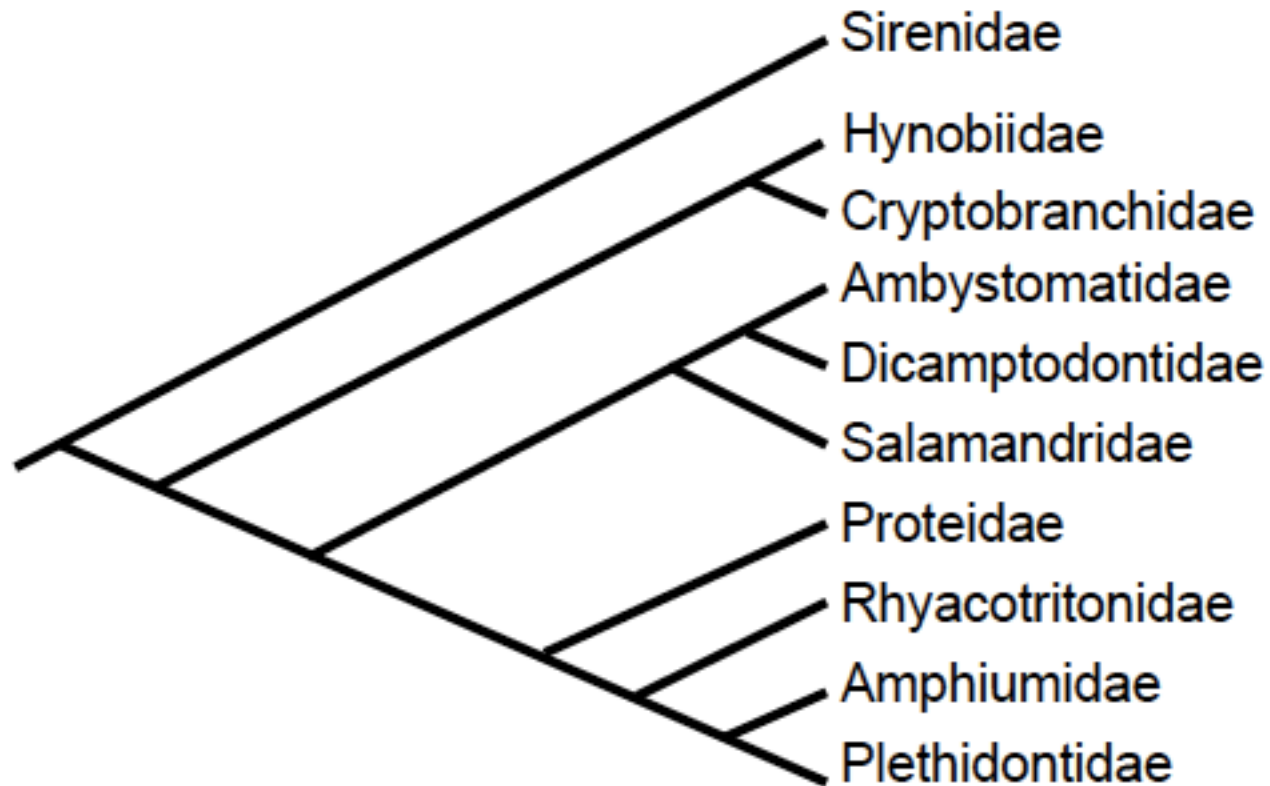
Ambystomatidae
(Mole Salamanders)



For more information, please visit
www.yearofthesalamander.org

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Caudata tree



Dichotomous key

- Create a book
- Only two options on each page
- Have a description or drawing of each characteristic you pick
- Key must go to species
- Organize so it is clear to anyone
 - Next week we will switch keys to see if they work
- Draw a flow chart as well to organize your thoughts

Next week

- Turn in dichotomous key book and flow chart
- There might be a quiz on picture ID
- We will be learning about lizards and snakes